What is claimed is:

1. A method for performing motion estimation of moving image by using a multilevel successive elimination algorithm (MSEA), comprising:

a) selecting an initial candidate block among a plurality of candidate blocks in an image frame for computing an initial SAD;

b) selecting four vertex candidate blocks placed at vertexes of a imaginary perfect square based on the initial candidate block as the center of the imaginary perfect square, wherein the imaginary perfect square is formed by using neighbor blocks adjacent from the initial candidate block;

c) extracting elimination levels of the four vertex candidate blocks by performing the MSEA;

d) predicting elimination levels for side candidate blocks which are located at sides of the perfect square based on a spatial correlation between elimination levels of candidate blocks and the extracted elimination levels of the four vertex candidate blocks; and

e) extracting elimination levels of the side candidate blocks by performing the MSEA based on the predicted elimination level.

2. The method as recited in claim 1, further comprising:

f) determining whether all blocks adjacent from the four vertex candidate blocks and the side candidate blocks are a boundary block of the image frame or not;

g) selecting four vertex candidate blocks of imaginary expended square based on the initial candidate block as the center of the imaginary expended square, wherein the imaginary expended square is formed by blocks located one blocks away from the four vertex candidate blocks and side candidate blocks in the step a), if there is any adjacent blocks existed as a result of step f); and

h) performing steps c) to e) for extracting elimination levels of four vertex candidate blocks of the imaginary expended square, predicting elimination levels of side candidate blocks of the imaginary expended square based on the elimination levels of the four vertex candidate blocks and extracting elimination levels of the side candidate blocks.

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3. The method as recited in claim 1, wherein the elimination level of side candidate blocks in the step d) are predicted by selecting the lowest elimination level between the elimination levels of two corresponding vertex candidate block as the predicted elimination level of the side candidate blocks, wherein the two corresponding vertex candidate blocks are two end points of the side including the side candidate blocks, and computing elimination level of the side candidate blocks based on the predicted elimination level.

4. The method as recited in claim 2, wherein the step f) includes a step of extracting and predicting elimination levels of remained candidate blocks in the image frame which do not have extracted elimination level based on the extracted elimination levels of neighbor candidate blocks.

5. The method as recited in claim 4, wherein the elimination level of remained candidate blocks in the step f) are predicted by selecting the lowest elimination level by comparing elimination levels of the neighbor candidate blocks overlap with their both ends of diagonal and straight lines

6. A computer readable recording medium storing instructions for executing a moving image motion estimation method of moving image using a multilevel successive elimination algorithm (MSEA), the moving image motion estimation method comprising:

a) selecting an initial candidate block among a plurality of candidate blocks in an image frame for computing an initial SAD;

b) selecting four vertex candidate blocks placed at vertexes of a imaginary perfect square based on the initial candidate block as the center of the imaginary perfect square, wherein the imaginary perfect square is formed by using neighbor blocks adjacent from the initial candidate block;

c) extracting elimination levels of the four vertex candidate blocks by performing the MSEA;

d) predicting elimination levels for side candidate blocks which are located at sides of the perfect square by using the extracted elimination levels of the four vertex candidate blocks; and

e) extracting elimination levels of the side candidate blocks by performing the MSEA based on the predicted elimination level.

7. The computer readable recording medium as recited in claim 6, the method further comprising:

f) determining whether all blocks adjacent from the four vertex candidate blocks and the side candidate blocks are a boundary block of the image frame or not;

g) selecting four vertex candidate blocks of imaginary expended square based on the initial candidate block as the center of the imaginary expended square, wherein the imaginary expended square is formed by blocks located one blocks away from the four vertex candidate blocks and side candidate blocks in the step a), if there is any adjacent blocks existed as a result of step f); and

h) performing steps c) to e) for extracting elimination levels of four vertex candidate blocks of the imaginary expended square, predicting elimination levels of side candidate blocks of the imaginary expended square based on the elimination levels of the four vertex candidate blocks and extracting elimination levels of the side candidate blocks.